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Patricia KLARNER
Vienna University of Economics and Business Administration

Toru YOSHIKAWA
Singapore Management University, toru@smu.edu.sg

Michael HIIT
Texas A&M University
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PATRICIA KLARNER
Vienna University of Economics and Business
Welthandelsplatz 1
1020 Vienna, Austria
T: +43 1 31336 4537
E: pklarner@wu.ac.at
(Corresponding Author)

TORU YOSHIKAWA
Singapore Management University
50 Stamford Road
Singapore 178899
T: +65 6828 0756
E: toru@smu.edu.sg

MICHAEL A. HITT
Texas A&M University
College Station
Texas, USA
T: +1 979 845 6676
E: MHitt@mays.tamu.edu

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ABSTRACT

A key role of board directors is to govern corporate strategy. Whereas prior research has provided insights into board roles and activities regarding board governance, the underlying capabilities required to govern effectively remain understudied. This article explores and explicates a capability-based view of board actions in which the specific capabilities that enable boards to govern strategic activities are identified. We specifically examine the conceptual foundations and different types of board capabilities, drawing on illustrative cases as well as information from interviews with board directors in the United States, Asia, and Europe. We then discuss several future research directions that can enrich our understanding of the effects of board capabilities on board governance. This article introduces a fine-grained perspective on board governance that examines the individual director, interpersonal, and board levels. By highlighting the need to build the foundation of governance capabilities at multiple levels, we extend our understanding of the compositional challenges for boards and their governance.

Keywords: Board of Directors; Board Functioning; Capabilities; Corporate Governance; Corporate Strategy

"Lowe's Board regularly evaluates its composition to ensure it includes the appropriate skills, experience and perspective necessary to drive growth for all Lowe's shareholders" (Lowe's Companies, Inc., January 19, 2018)

Boards of directors have a legal responsibility to ensure that the company is managed in a way that provides the best value for shareholders. Thus, they are expected to monitor top managers' decisions and actions and to advise them on strategic activities (Dalton, Hitt, Certo & Dalton, 2007; Jensen, 1993). Yet, while boards have legal responsibilities, the role of boards has been evolving in response to a more complex institutional and competitive environment. In particular, board governance also includes providing the resources and advice to management needed to develop and effectively implement critical strategic activities required to compete effectively with rivals. Consequently, boards have become more concerned about their members' skills and knowledge. This concern is exemplified in the quote above, which suggests that Lowe's board is proactive in managing its members' skills and expertise. Effective boards develop and maintain specific capabilities that allow them to go beyond their basic legal requirements and also provide advice and resources to management on critical strategic activities. Thus, the purpose of this article is to present a capability-based view of board actions, thereby providing a new perspective based on current and evolving board practices.

Effective board governance is essential to ensuring long-term firm growth and prosperity. It has strong implications for executives' careers, employees' job security, and board members' reputations. Due to their performance implications, investors, competitors, and regulators closely observe and analyze corporate strategic activities. It is therefore important to understand how boards govern these activities over time. Yet, despite considerable research on corporate governance, researchers have paid little attention to *how* boards govern strategic activities.

We argue that boards need specific capabilities to govern strategic activities effectively. The capability-based view of board governance we introduce here identifies different types of board capabilities. Specifically, boards benefit from capabilities to (1) organize their expertise, (2) build relationships within a board and with key stakeholders, (3) assess how new strategic activities can be integrated into the firm's existing strategic activities, and (4) determine how to best allocate resources to respond to changing market demands and rivals' actions. Taken together, these four capabilities help boards to combine their existing knowledge and leverage it for their governance of corporate strategic activities, to access information on management's strategic proposals, to gain a better understanding of the firm's strategic activities, and to remain adaptive in times of change.

To examine the types of board governance capabilities, we draw on illustrative cases as well as information from interviews with board directors in the United States, Asia, and Europe. We then develop an agenda for future research to help us deepen our understanding of the board governance capabilities. This article increases our understanding of *how* distinct types of board governance capabilities influence strategic activities. We thereby introduce a fine-grained perspective on board governance that examines the individual director, interpersonal, and board levels. In doing so, we extend our understanding of the compositional challenges that boards face (Hambrick, Misangyi, & Park, 2015; Johnson, Schnatterly, & Hill, 2012; Lynall, Golden, & Hillman, 2003) and highlight the multilevel foundations of governance capabilities.

A COMPREHENSIVE VIEW OF BOARD GOVERNANCE

"Well-functioning boards are directly involved in the process before the final strategic decision is made. A good board is involved from the beginning and would not react well to a strategic decision brought to the board for approval in which the board members had not been involved."

U.S. board director

Traditional notions of board governance have adopted an agency theory lens and have focused on the board's role in *monitoring* top management by ratifying resource allocation decisions and strategic proposals as well as incentivizing managers to make decisions that optimize shareholder value (Fama & Jensen, 1983b; Jensen, 1993). Hence, boards monitor management with the intent of controlling the outcomes of managers' strategic actions (Fama & Jensen, 1983a).

Other studies, following the resource dependence perspective, have examined the board's role in *providing management with advice* on strategic opportunities by sharing information, resources, and counsel (Hillman & Dalziel, 2003; Charan, 1998). Boards are therefore not only regarded as the "apex of the firm's decision control system" (Fama & Jensen, 1983b: 311), but also govern by sharing their knowledge and expertise on strategic matters and by taking a more active role in strategy formulation (Forbes & Milliken, 1999). Since CEOs and other executives don't always have sufficient knowledge and experience to deal with the complexity in the firm's competitive landscape and environmental milieu, board directors' active contributions – especially from outside directors – are critical (Charan, Carey, & Useem, 2014). Further, legal liabilities and risks faced by the board continue to grow due to increasing shareholder activism and new governance regulations (Allianz, 2016), heightening the value that directors can contribute. Judge and Zeithaml (1992) found that firms performed better when the board of directors is more involved in strategic decisions, demonstrating its importance.

Clearly, boards differ in the extent to which they monitor and advise on strategic activities. Nonetheless, research and governance practice (Charan et al., 2014; Dalziel, Gentry, & Bowerman, 2011; Finkelstein & Mooney, 2003) has shown that, in the current environment – referred to as the *new normal* by former PIMCO CEO, El Erian (2016) – boards often engage in both monitoring and advising, as the quote above illustrates.

BOARD GOVERNANCE CAPABILITIES

"Boards are tuned into their collective capabilities" U.S. board director

"Boards need to monitor over time whether they have the capabilities they need" European board director

To strategically adapt to changing environments, firms need to develop dynamic capabilities to integrate, build, and reconfigure their resources and competencies (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997), ensuring higher long-term performance (Teece, 2007). Similarly, boards of directors also need specific capabilities to fulfill their tasks of governing strategy (Macus, 2008). *Board governance capabilities* are defined as the capabilities with which directors influence the building, integration, and reconfiguration of organizational resources and competences needed for the development and implementation of corporate strategies. These capabilities play a critical role in directors' influence on strategic decisions and their execution.

When we interviewed board directors across a range of countries, it became apparent that they understand board capabilities' importance, as the above quotes illustrate. Corporate governance research has often focused on different board roles in strategic issues (Hillman & Dalziel, 2003), without providing insights into the different types of capabilities needed to fulfill board roles and especially as they relate to specific strategies adopted by a firm. The capability-based view of board governance we introduce here provides a fine-grained lens to study and understand how boards contribute to strategy formulation and implementation.

Foundations of Board Governance Capabilities

Corporate governance scholars have characterized boards as episodic decision-making groups that need to engage in strategic-issue processing (Forbes & Milliken, 1999). Although boards often meet more intermittently than other types of team in organizations[1], they still display work teams' characteristics (Kozlowski & Ilgen, 2006; Mathieu, Tannenbaum, Donsbach, & Alliger, 2014). They contain several individuals; interact socially (e.g., Forbes & Milliken, 1999); have one or several common goals (e.g., governing in the interests of shareholders); perform organizationally relevant tasks (governing strategic activities); exhibit interdependence in their workflow, goals, and outcomes; have different roles and responsibilities (e.g., as inside and outside directors and service on specific board committees); and are collectively embedded in an organizational system. Hence, board directors – similar to all types of teams' members (Kozlowski & Klein, 2000; Payne, Benson, & Finegold, 2009) – need to have specific knowledge, skills, abilities, and other characteristics (KSAOs) to effectively fulfill their governance duties. KSAOs are important compositional elements of team design (Kozlowski & Ilgen, 2006), and boards of directors need an appropriate mix of KSAOs in order to perform their duties.

Building on research on organizational teams (Mathieu et al., 2014), we examine *three kinds of KSAOs* – task-specific, team-generic, and firm-specific KSAOs – that are particularly important for boards. Whereas task-specific and team-generic KSAOs have been examined in the context of organizational teams (Mathieu et al., 2014) (but not in the context of boards), we introduce a third type of KSAOs, namely firm-specific KSAOs.

Task-specific KSAOs. Task-specific KSAOs are focused at the individual director level. Every board member must have relevant KSAOs to effectively perform their tasks (e.g., Mathieu

[1] Compared to some teams in organizations that meet daily, boards meet less often. However, our interviews with directors in the U.S., Asia, and Europe revealed that boards meet more often than the few yearly scheduled meetings. They meet electronically on major issues that the board must consider, especially because board decisions can seldom wait for the next formally scheduled board meeting. Further, board subcommittees often meet more regularly.

et al., 2014). This includes director-specific expertise to monitor and provide advice on specific strategic issues (Finkelstein & Mooney, 2003; Hambrick et al., 2015), such as a large-scale mergers or acquisitions, innovation programs, corporate financing options, or the expansion of international operations. Task-specific KSAOs therefore represent directors' human capital, which is relevant for strategic purposes. Since *human capital* is embedded in social networks (Nahapiet & Ghoshal, 1998), directors' KSAOs also relate to the human capital they acquire through their *social capital*, i.e. their different firm-internal and external networks (Tsai & Ghoshal, 1998).

If directors lack relevant task-specific KSAOs, they may not fully understand strategic choices, opportunities, and threats, which – in turn – dilutes the quality of their governance. Governance research has shown the importance of directors' specialized expertise in monitoring and providing advice on strategic matters, such as acquisitions (McDonald, Westphal, & Graebner, 2008) and firm growth (Kor & Sundaramurthy, 2009). Inside directors may have more knowledge of the specific strategic concerns discussed in the boardroom, because they have access to more internal information. Consequently, it is important that a critical mass of outside directors has knowledge of different strategic issues through their roles and professional experience gained at other firms to ensure that different options are discussed, thereby complementing the insiders' perspective. Both insiders and outsiders need to have the cognitive abilities to process large amounts of information on strategic opportunities for and threats to planned actions.

A U.S. board director gave us an example of directors' task-specific KSAOs: *"Our board's expertise in global business was called on in decisions to enter new international markets. In particular, the executives might look to board members to help define the potential challenges (e.g., special regulations and cultural attributes in different markets) they might face in different markets. Of course, they could also call on contacts within the board members' external networks for such information."* Ideally, individual directors should have complementary task-specific knowledge to ensure that the full board has knowledge of different strategic areas, allowing them to respond to different strategic issues. In reality, boards differ in their task-specific knowledge, with increasing efforts to build more diverse boards. Even diverse boards should have a critical mass of expertise in the most important strategic areas in order to facilitate a debate on such issues in the boardroom, instead of relying on a single director's expertise.

An outside director at a specialized Japanese retail company confirmed the importance of complementary expertise on the board: *"All our directors have the same legal responsibilities, and we share that basis. But we don't need a superman. Instead, it is important how we contribute as a group with different functional expertise. There should be a mixture of different but complementary skills suitable for a company's business."*

Team-generic KSAOs exist at the interpersonal level and address the director-director dyad and the director-board (team) relationship. It is assumed that team effectiveness is enhanced when all members have team-generic competencies (Mathieu et al., 2014). Examples of such team-generic KSAOs important for team effectiveness (Cannon-Bowers, Tannenbaum, Salas, & Volpe, 1995) include: (a) adaptability (to tasks and situations), (b) shared situational awareness, (c) performance monitoring and feedback, (d) leadership/team management, (e) interpersonal relations, (f) coordination, (g) communication, and (h) decision making.

Team-generic KSAOs are particularly important, because board directors need to be adaptive to new strategic situations that require their governance. For instance, suddenly emerging growth opportunities (e.g., an acquisition target becoming available) or crises (e.g., a scandal) require board directors to shift their governance attention to the current issues. However, board directors also require a shared situational awareness in order to develop a common understanding of a given strategic situation and management's strategic proposals. This shared situational awareness is particularly important in the context of dynamic and complex situations (Cooke, Salas, Cannon-Bowers, & Stout, 2000; Salas, Stout, & Cannon-Bowers, 1994), which often applies to board governance. Boards engaging in team management benefit from directors' different task-specific experience, because they are likely to listen to every director's specific expert view and integrate these expert views into their governance decisions. Directors who develop strong interpersonal relationships with other directors are more likely to share their task-specific knowledge in strategic discussions (e.g., during board committee meetings or in informal exchanges). Such relationships between board directors can also facilitate their coordination, communication, and decision making as a group.

Interaction between directors is essential for information exchange and knowledge sharing (Forbes & Milliken, 1999), which are required to make informed decisions about corporate strategic activities. Thus, team-generic KSAOs enable board directors to cooperate (e.g., Mathieu et al., 2014), collectively understand new tasks, and make joint decisions. These team-generic KSAOs are critical for exchanges between individual directors working together in expert subgroups, such as board committees. However, they are equally important at times when there are collective discussions among all directors (experts and non-experts on a specific strategic issue), to ensure that experts' views are considered and incorporated into board decision making.

Since it may be difficult to develop strong team norms if boards meet only several times per year (Finkelstein & Mooney, 2003), directors also engage in corporate activities and gather information on key issues in more informal settings. Although directors meet episodically for board and committee meetings (formally scheduled as well as technologically facilitated meetings) (Payne et al., 2009; Tuggle, Schnatterly, & Johnson, 2010), some directors also meet more spontaneously at times – for instance, when visiting company facilities and gathering information about strategic activities (Patricof, Henderson, Marcus, Smale, & Johnson, 1995).

In this regard, a Japanese board director at a major chemical company and at a large automotive component manufacturer said: *"Companies often want outside directors to understand their business well. It is important for manufacturing companies to get board members to take a look at factories and plants [to understand their business]. For example, I visited a different plant of this company every month last year* [....]. *Executive directors usually visit there, but outside directors also usually join. For another company, I visited [its plants in] China and Southeast Asia and will visit the U.S. in July, and Europe in December."*

Directors' cooperation on the board, their trust in one another's expertise, and their teamwork will improve their governance (Kaufman & Englander, 2005). A quote from a Japanese board director at a major electronics company illustrates the importance of teamwork in the board: *"At a company where I serve as a board member, there are golf tournaments with other board members twice a year. What's most enjoyable is not the golf, but rather our conversation on the bus on our way to and from the golf course. By having conversations about various topics, we feel that we are on the same team, and it motivates me to work toward common goals."*

Firm-specific KSAOs address the firm-director dyad and the external environment-director dyad. We introduce firm-specific KSAOs as a new construct, thereby extending the KSAOs examined in team research to boards of directors. Firm-specific KSAOs are developed by first understanding the firm's internal (organizational) and external (industry and key stakeholders) contexts (Forbes & Milliken, 1999). Since every firm is unique, and directors' task-specific and team-generic KSAOs cannot be easily transferred to another firm's context, directors must adapt to the specific firm context and must understand the firm's unique internal and external conditions.

For instance, the consumer products company Procter & Gamble aims to appoint directors with experience in household and personal product categories (Creswell, 2017) who have the appropriate in-depth knowledge to evaluate strategic matters in these core market areas. It has recently also begun to search for directors with experience in areas of increasing strategic importance, such as digital and big data analytics as well as artificial intelligence (Creswell, 2017).

Board directors develop a deeper understanding of the firm's internal and external contexts through board and committee meetings as well as informal exchanges with managers, employees, and external stakeholders. Specific directors can accompany the CEO to meetings with key investors, or the lead director can directly engage in a dialog with investors (Charan et al., 2014). Thus, information exchange processes between board directors and with internal as well as external stakeholders help to develop important firm-specific KSAOs, which are beneficial for directors to assess whether and how strategic activities fit the firm's context and which changes may be required to make a new strategy work (e.g., changes to the organization's structure, culture, and processes to help it implement the new strategy). Firm-specific KSAOs also help directors to assess how stakeholders, such as customers or suppliers, may react to major changes. Board directors likely differ in their firm-specific KSAOs, depending on their board tenure and their ties to different stakeholders. Nonetheless, boards need to ensure that directors develop firm-specific KSAOs over time through exchanges with different stakeholders.

Types of Board Governance Capabilities

Individual directors' and their integrated KSAOs are the foundation of board capabilities, and different KSAO types relate to different board capabilities. We examine four types of board governance capabilities that help boards to govern strategic activities.

Board organizing capabilities. Board organizing capabilities enable directors to leverage their task-specific and firm-specific KSAOs to effectively monitor and provide quality advice on strategic activities. Prior research has used board human capital as a proxy for the board's ability to govern strategic activities (Haynes & Hillman, 2010; Kor & Sundaramurthy, 2009), assuming that directors use their human capital as required. Yet, given boards' time constraints (Boivie, Graffin, Oliver, & Withers, 2016), they need to organize their directors' expertise in a way that allows every director to provide ideas in their expertise area.

As part of the organizing process, boards sometimes establish specialized committees to evaluate specific strategic issues and report to and provide recommendations to the full board. For instance, the technology company Cisco, whose growth strategy relies on mergers and acquisitions, established a specialized board acquisition committee to review and approve acquisition transactions proposed by top management (Cisco, 2009). U.S. boards have recently begun to reshape their committee structures and established new committees, such as risk; science and technology; and environment, health, and safety committees (SpencerStuart, 2018). However, boards can only establish a limited number of committees, to avoid increasing coordination costs. Thus, they need to use efficient organizing principles to enable their directors to evaluate strategic activities. In this regard, annual calendars, committee charters, and decision protocols can be used to differentiate between independent monitoring and active advising (Charan et al., 2014).

In addition to such coarse-grained organizing principles, more fine-grained processes ensure that individual directors' KSAOs are effectively integrated and leveraged. It is therefore important to better understand the dimensions of board organizing capabilities, i.e. the processes boards use to assign directors to specific committees and board tasks in which their relevant KSAOs can be leveraged. Directors need a certain extent of autonomy to use their knowledge in the governance process (Boivie, Graffin, & Pollock, 2012), but they also need an organizing structure that helps them contribute to issues on which they have the most expertise. Whereas assigning some directors to standard committees such as audit and nomination committees that match their experience is fairly straightforward, boards may require more formal processes to assign directors to less standard committees, such as innovation committees and specialized task forces.

Board organizing capabilities also support the formal and informal exchanges between directors to transfer knowledge across board committee boundaries and between directors. In times of increasing data availability and technological advancements, boards may use novel approaches to share knowledge. Some boards rely on technology-facilitated meetings and discussions. Such meetings save travel time to distant meeting locations and require less coordination. Consequently, they are particularly useful if directors need to exchange views on a particular issue, such as a company crisis, within a short time.

For instance, Netflix has developed two unique board meeting practices to foster knowledge exchange and discussion (Larcker & Tayan, 2018b): First, it offers its directors a short online memo on strategic and organizational issues with links to supporting analyses and allows them access to all data and information on the firm's internal system. The directors then ask questions about and comment on this quarterly memo; the executives answer the questions, turning it into a living document written by both the board and the executives. Because the discussion on the digital memo takes place prior to the board meetings, the directors are well prepared. Consequently, the meetings are much more productive, and the directors have a platform to share their expertise with the executives and other directors. Executives and the board openly discuss major strategic changes, such as international expansion and making significant investments in the production of proprietary content (Larcker & Tayan, 2018a). Second, directors periodically attend executive meetings, ranging from those with the top seven executives to the top 500 employees, to learn about the current issues the company faces, how managers arrive at their decisions, and the tradeoffs they face in their decision making (Larcker & Tayan, 2018b). Directors also get to know different experts in the company and how executives address topics discussed at a board meeting.

Whereas much specialized discussion takes place at the committee level, a European director told us: *"We have to constantly remind ourselves that we do not make any decision as a committee.*

Instead, we make recommendations to the full board". He also stated that *"the board chairman has to ensure that the entire board makes key decisions".* The board chair has a critical role in supporting exchanges between committees and the board, proposing directors for committees, and ensuring that the outcomes of committees' discussions are reported to the full board.

Board organizing capabilities also become relevant during director changes. A U.S. director told us that his board evaluates its capabilities before it selects new directors to replace exiting directors. The board then considers the required expertise of new directors to ensure that it will add value to the company. Similarly, a European board director told us that *"The assignment of directors to specific committees is already discussed during new director selection. You have to think about how to organize the board in terms of knowledge and how to assign new directors to specific committees."* Thus, board organizing capabilities influence the selection and integration of new directors. According to the director, when two firms merge, the board needs to reorganize and *"ensure it has the right board candidates for the right committees*". Consequently, boards must carefully consider how their organizing capabilities should be altered for strategic changes.

Board relationship-building capabilities. Relationship-building capabilities facilitate good working relationships among directors, executives, employees, and other stakeholders relevant for the governing of strategic activities. Directors must build good and trusting working relationships with the other directors (Letendre, 2004) to engage in effective governance of strategic activities. For instance, a U.S. board director told us that *"The chemistry between the board members is important, so that they can openly discuss issues and cooperate to resolve problems."*

Further, relationship-building capabilities help directors to build good working relationships with different internal (e.g., executives, employee groups) and external stakeholders (e.g., business partners, competitors, investors, suppliers, and customers). In turn, such relationships facilitate director access to relevant information about the firm's strategic activities (e.g., Pfeffer & Salancik, 1978; Sundaramurthy & Lewis, 2003), which helps them to understand important strategic issues and challenges, as well as potential changes in customer demands, investor preferences, and competitors' strategic activities. Directors' combined relationship-building capabilities ensure access to a network of individuals that provides information and other resources and helps them to make more informed governance decisions. For instance, a 2016 survey of directors revealed that more effective boards have a stronger culture of trust and use their relationships to gather information beyond what is provided by management than less effective boards (McKinsey, 2016).

Directors' task-specific and firm-specific KSAOs contribute to relationship building with other stakeholders in the same area of expertise or knowledge domain. For instance, directors with deep experience of a particular innovation type enjoy a reputation as an innovation expert on the board, but their knowledge also helps them when discussing specific innovation activities with other employees (e.g., scientists, innovation team members) and external stakeholders.

In this respect, a European board director highlighted the board chair's role: *"The chairman is in charge of talking to multiple stakeholders, including the media. You also selectively use other directors' networks in specific situations. For instance, at one firm, we wanted to do business in China, and a director with experience of working there introduced the CEO to relevant people. But as a rule, all contact made with the outside goes through the board chairman."*

In contrast to task-specific and firm-specific KSAOs, which can influence relationships with employees at different hierarchical levels and with external stakeholders, team-generic KSAOs can contribute to relationship building within the board. Directors' repeated interactions on a strategic issue and the interpersonal relationships that result are particularly important, since they form the foundation for relationship-building capabilities. Boards can develop their relationship-building capabilities in several ways. First, directors need to get to know one another personally in order to develop a culture of trust in the board. Informal exchanges outside formal meetings help to develop and maintain such a culture of trust. For instance, a European director told us that *"It is very important for the board to have offsite meetings, away from the office, where you spend two days with one another discussing the firm's strategy, but also getting to know one another and building a good working relationship on the board."*

Second, if the two roles are separated, the board chair specifically must develop a good working relationship with the CEO. Asked to describe the best relationship between a board chair and a CEO, Marijn Dekkers, Chairman of Unilever, stated that it is based on transparency, openness, and people who know how to get along (Bottomley, 2017). In some companies, board chairs have offices close to the CEO so as to facilitate personal interaction. In other cases, board chairs have regular calls and other interactions with the CEO. Whatever the form, it is important that the board chair and the CEO have constructive and open discussions to build a good working relationship, one that allows for a free exchange of ideas and also allows the CEO to seek advice.

Board integration capabilities. Board integration capabilities enable directors to govern the orchestration of resources and their fit with different strategic activities, i.e. monitoring the allocation of resources to different strategic activities and assessing whether proposals for strategic actions fit the firm's primary goals. Such capabilities require directors' task-specific KSAOs, i.e. their expertise in specific strategic domains, their team-generic KSAOs to ensure communication between them and coordinate their knowledge and views regarding decisions about strategic resource allocations, as well as firm-specific KSAOs that help directors to evaluate strategic activities in light of the firm's current and prospective market opportunities.

A European board director suggested that it is important for boards to evaluate proposed strategic activities in light of the firm's existing strategy. He gave an example: *"The CEO proposed an acquisition that I could not understand when preparing for the board meeting in which the acquisition was discussed. I had many questions on the acquisition proposal and how it would fit* *the firm's strategy. For instance, I asked the CEO how important the acquisition was for the firm's strategy. After our discussion, the proposal was withdrawn. It is very important that boards ask questions and discuss how new initiatives fit the firm's overarching strategy."*

Consider the case of a company seeking organic growth (e.g., innovation) that examines the strategic opportunity of a major acquisition to complement its growth trajectory. The top executive team must address the board to gain its approval for this major transaction. In this case, directors need task-specific KSAOs, i.e. knowledge of growth through innovations and acquisitions, as well as firm-specific knowledge to assess the potential challenges of integrating an acquired firm into the firm's current organization and of ensuring knowledge transfers between the two organizations' employees. Directors also need to be able to assess the strategic opportunities that the acquired firm could provide (e.g., access to a particular technology or new markets). Directors with deep innovation experience and those with expertise in acquisitions are likely to have a strong voice in the boardroom discussions on such a decision. However, these directors' task-specific and firm-specific skills will be particularly beneficial if they have strong team-generic skills, including good interpersonal skills, to ensure effective relationships between the directors – whether they communicate effectively and whether they share their relevant knowledge of the takeover target in light of the firm's existing strategy. This will be useful for effective board monitoring and directors' advice provision on the management's growth proposal. However, since a firm that has emphasized organic growth may have a board heavily weighted by members with innovation-related knowledge, directors may need to use their social networks to access knowledge about acquisitions to properly evaluate and provide advice on this proposal. Boards need to integrate different expertise to assess whether such an acquisition fits the company's growth goals and to evaluate the investment required for the acquisition.

Integration capabilities also allow boards to view strategic issues from a *big picture* perspective. It is necessary to share directors' expertise on complex strategic issues and to combine their task-specific and firm-specific knowledge in order to understand the firm's strategic portfolio from such a perspective. Such a broader view may also help to plan board meetings to ensure that boards spend enough time on different strategic themes, while also discussing how these themes are interrelated, so as to ensure effective resource allocations.

Further, boards need to systematically evaluate the allocation of resources for strategic activities in accordance with the strategy on which the top management and the board agreed (StanfordLawSchool, 2014). Board support also helps the CEO to justify the firm's resource allocations. Regular discussions and analyses of the resource allocation process and strategic results are important, to ensure that slack resources are identified and allocated to new strategic investments, and/or that current resource investments that are not producing the desired returns are allocated to activities with more potential.

Board reconfiguration capabilities. Reconfiguration capabilities can enable directors to understand how resources can be reallocated to create new capabilities needed to compete in a changing environment. Thus, they help directors to monitor and advise top executives on strategic changes and on resource allocations to new activities. The underlying dimensions include routines that enable boards to leverage directors' task-specific KSAOs and firm-specific KSAOs in order to identify *when* strategic changes are needed, *which* changes are required to remain successful in the long term, and *how* to evaluate the feasibility of the implementation of specific strategic actions. A European director mentioned that boards generally must evaluate which market changes and trends are likely to be long term, whether they are important for the company, and whether they have – or need – the relevant expertise on the board.

Firms operating in a swiftly changing environment may also need to change the board's knowledge composition if they are to evaluate new strategic opportunities. For instance, boards' reconfiguration capabilities may require task-specific KSAOs in change management generally but also in specific areas, such as cybersecurity, macro-economic volatility (uncertainties), or digitization. A 2018 SpencerStuart survey of directors of U.S.-listed firms revealed that directors think they are insufficiently prepared and equipped for the pace of technological change and disruption (SpencerStuart, 2018). A critical question is how boards can better address such pressing threats and can ensure that sufficient resources are allocated to emerging technological opportunities, such as big data analytics or machine learning. Boards may recruit directors with more technology experience or may obtain external advisers with specialized technological expertise. The first option has the benefit of having more permanent expertise on the board, but it may take too long to recruit new expert directors and change the board composition to address the current technology threats and ensure effective board governance. The second option – relying on outside expert advisers – provides boards with quicker and more flexible expertise to cope with emerging technological issues. However, in this case, boards must open the boardroom to external experts, which increases the risk of information leakage.

Importantly, boards must identify the required KSAOs for adapting to changing market demands. A European director stated: *"The board needs to have a clear view of the firm's strategy and which knowledge it requires to govern effectively. In a two-tier system, you need to think of the knowledge and expertise you need on the supervisory board and on the management board. Over time, you need to repeat this exercise, for instance, after a strategic change. The board must monitor, over time, whether it still has the right expertise. […] A board must remain alert to what's going on in the market and must ensure it has the expertise deal with disruption."*

Reconfiguration capabilities on the board also require a long-term perspective to ensure that the company can address new challenges and thereby remains adaptive and successful. Boards thus also need to learn about and discuss the long-term economic, technological, and demographic trends that will reshape their industries (Casal & Caspar, 2014). In times of the intensifying pressure for short-term results faced by the executives of listed companies (Carey, Dumaine, Useem, & Zemmel, 2018), the board must ensure that top management navigates the firm through dynamic and emerging challenges and that it remains adaptive over time. In so doing, the board must also ensure that sufficient resources are allocated to long-term strategic opportunities. A board's long-term perspective facilitates the creation and development of future capabilities, which are required to compete in different environments.

For instance, when the Belgium-based company Interbrew (now part of Anheuser-Busch InBev) decided to enter China in the early 1990s, its board and the executive team traveled there for a week to learn as much as possible about the country and the market (Barton & Wiseman, 2015). The board directors gained insights into the competitive landscape and operating environment. Because Interbrew planned to acquire a firm in China in the future, its directors had enough time to learn about the market and engage in a thorough debate – all of which would not have been possible at the time of the acquisition, due to pressure to rapidly complete the deal. In 1997, the company acquired two local breweries to enter the Chinese market. Within six years, it became the third-largest brewer in the country, with a nine percent market share. This example illustrates the importance of the board's long-term strategic perspective. Assessing which capabilities are required to compete and grow in the future and how to develop such capabilities requires board directors to continuously learn about emerging challenges and opportunities as well as to discuss such issues in the boardroom, at retreats, on work trips, and during site visits.

Figure 1 depicts our framework of board capabilities, director KSAOs as the foundations of such capabilities, and how board capabilities influence the board roles of monitoring and advising (i.e. board governance) and – ultimately – firm strategy and performance.

INSERT FIGURE 1 ABOUT HERE.

HETEROGENEITY IN BOARD CAPABILITIES

Boards of directors most certainly vary in their capabilities and their use of these capabilities in their governance. However, some of these capabilities cannot compensate for the lack of others; thus, if all four capabilities are present, board governance will be more effective.

Conversely, board governance is likely to be deficient if certain capabilities are lacking. For instance, if a board lacks organizing capabilities, it may fail to leverage the directors' expertise in the relevant board discussions and committee work. Despite the presence of directors' task-specific KSAOs, their knowledge may not be sufficiently utilized in the appropriate strategic discussions. If boards don't have relationship-building capabilities, they lack a foundation to work together, share the directors' experience, and make informed joint board decisions. If boards lack integration capabilities, they will fail to develop an overview of the firm's – existing and new – strategic activities, nor will they develop a common understanding of how resources need to be allocated. Finally, if boards lack reconfiguration capabilities, they are unlikely to comprehensively assess how the resource portfolio should be changed to make use of emerging strategic opportunities and to avoid threats, and – thus – how to help guide executives to re-bundle resources to build the new capabilities required to exploit the emerging opportunities. We will now discuss three cases of boards that did not develop the needed capabilities, and the negative consequences that resulted.

Hewlett-Packard case

Hewlett-Packard's (HP) board of directors between 1999 and 2011 exemplifies the problems that can result from a lack of the aforementioned capabilities. HP's board specifically exhibited a lack of organizing and relationship-building capabilities, even though individual board members had significant human capital with valuable KSAOs for a firm such as HP. The directors had trouble selecting CEOs who could provide the leadership the firm needed. They hired Carly Fiorina in 1999, but asked her to resign in 2005 when the acquisition of Compaq failed to produce the expected performance (Larcker & Tayan, 2011). The acquisition decision was highly controversial, with the board members publicly disagreeing about it. The board also failed to build consensus with the firm's key stakeholders.

Thereafter, the board's non-executive chair, Patricia Dunn, together with two other directors, led the search that ended with the hiring of Mark Hurd, known for his capability to achieve significant operational efficiencies. Much of Hurd's focus was on improving the cost efficiency of the company's operations (e.g., he laid off 14,500 employees). Unfortunately, within a year of hiring Hurd, Dunn was forced out as board chair due to the continuous leaks of confidential boardroom discussions, which suggested that HP's board was unable to build a culture of trust. In 2010, a company contractor maintained that Hurd had sexually harassed her. A board investigation cleared Hurd of this charge but discovered that, in trying to hide his relationship with this woman, he had submitted false expense reports. While the board voted six to four in favor of Hurd's resignation, nonetheless, some board members felt that the change was "reckless".

A different board search committee subsequently hired Leo Apotheker. However, the dispute between the directors continued to cause problems for board processes and decisions. Apotheker, who had little CEO experience (less than one year as a solo CEO at SAP), achieved less-than-stellar performance. Further, not all the directors had participated in the hiring of Apotheker. Some had not interviewed him, and a few had not even met him (Stewart, 2011). Lacking strong relationship-building capabilities, the board did not even have an appropriate debate about the company's required strategic direction. This led to poor integration and reconfiguration capabilities on the board, and a resulting failure to develop a thorough overview of HP’s strategic activities and new opportunities. Apotheker abruptly changed Hurd’s strategy, announcing the termination of HP’s move into tablet computing and the selling or spinning off of its PC division (Larcker & Tayan, 2011; Winkler, 2011). He also acquired Autonomy, a business analytics company, which caused a 20 percent decline in HP’s stock price when the acquisition became public. At this point, in 2011, the board decided to fire Apotheker – only 11 months after hiring him. The board finally realized that hiring Apotheker and supporting the major changes he initiated were mistakes that caused the company significant suffering. Even worse, each of the CEO departures comprised substantial severance packages (Fiorina: $21 million, Hurd: $35 million, Apotheker: $9.6 million). Finally, without using a search committee, the board appointed one of its current directors, Meg Whitman, as the new CEO in 2011.

The HP board’s inability to build its capabilities and leverage them caused substantial harm to the company. Once an industry stalwart, the company’s perpetual CEO and corporate strategy changes, the board operation’s continued ineffectiveness, and its bad decisions rendered HP far less important in the industry, decreased its shareholder value, and damaged its reputation.

Toshiba case

Toshiba was once known as a major Japanese company with a progressive corporate governance system. For instance, Toshiba invited independent directors to serve on its board even before this was officially required in Japan, and its investor relations function actively communicated with capital market participants. In line with the U.S., Toshiba adopted the committee system in 2003: the nominating, audit, and compensation committees had a majority of outside directors, modeled after the U.S. system at a time when many Japanese executives were critical of the U.S. governance system due to accounting scandals (Saga, 2015). When Toshiba’s own accounting scandal was revealed, both the CEO and the board resigned in 2015 (Reuters, 2015), which suggests that the board did not have the appropriate capabilities to prevent such a scandal. The directors did not have an in-depth discussion about the financial data provided by the company management.

An investigation revealed that Toshiba's operating profits had been overstated by about $1.2 billion (Ando, 2015) and had involved multiple Toshiba business units (Nikkei, 2015). The improper accounting was found to have occurred over a seven-year period, embroiling two former CEOs and the current CEO, Hisao Tanaka. Although Toshiba's CEOs had not directly instructed their subordinates to 'cook the books', they had pressured them into showing better financial results (Saga, 2015). The investigative panel also raised weak corporate governance and a poorly functioning internal control system at every level at Toshiba.

When the scandal was revealed, Toshiba had four independent directors, none of whom had accounting expertise. While one independent director became suspicious of the sharp spike in profitability and asked the accounting department about it, no action was subsequently taken (Nakanishi, 2015). Unlike HP's board directors, with their rich and relevant human capital, Toshiba's board had no outside directors with such human capital to identify the inappropriate practice, which had occurred over several years. The Toshiba board's lack of organizing capabilities harmed its reputation and led to a massive restructuring of the firm's businesses, including a large reduction in employees and a huge fall in the sales of its semi-conductor business, in which Toshiba was a leading industry player. Further, as three of Toshiba's four independent directors had no business experience and had difficulty developing relationship-building capabilities, they could not form a united front vis-s-vis management. Thus, they did not exchange sufficient information, which was detrimental to their effective monitoring.

Air France-KLM case

The board of Air France-KLM is a recent example of weak governance capabilities. In May 2018, the CEO, Jean-Marc Janaillac, resigned after a series of employee strikes and employees' decision to reject a pay deal (Air France-KLM, 2018a; Kar-Gupta, 2018). Janaillac had taken over a company in crisis: Since their merger in 2004, Air France-KLM had been struggling with internal problems and consistent losses (Buyck, 2013). Since 2011, Air France-KLM had had several CEOs in an attempt to restructure the company and to compete effectively with low-cost rivals and heavily subsidized Middle Eastern airlines (Buyck, 2013). It had also faced strong employee resistance to cost-cutting programs and layoffs over the years (Bershidsky, 2018).

During his less than two years in office, Janaillac initiated additional reforms to restructure Air France and to improve its financial health, struck deals with Delta Air Lines and China Eastern, and launched Joon, a low-cost subsidiary (Kar-Gupta, 2018). The stock market reacted positively to his efforts to improve the firm's cost structure, but the new pay deal negotiations with the French unions were unsuccessful, which led Janaillac to step down (Kar-Gupta, 2018). The employee strikes cost the airline more than €300 million, which strongly affected its financial results, and called into question its long-term viability (Keohane, 2018). However, the board of directors seemed surprised at the CEO's decision to step down, and named finance chief Frederic Gagey as interim CEO and board member Anne-Marie Couderc as interim non-executive chair (Nussbaum, 2018). Shortly thereafter, the board decided to jointly appoint a three-person management committee: Gagey, who became group CFO and group CEO; the Air France CEO; and the KLM CEO, both of whom serve as deputy CEOs (Keohane, 2018). Essentially, the board set up a three-person CEO, seemingly ignoring the coordination efforts among them required to make strategic decisions. The board considered this "transitional governance structure" as a temporary solution "for the shortest possible period". The company highlighted that the "Air France CEO does not have a new mandate to take decisions that would jeopardize the growth strategy approved by the Air France-KLM board of directors" (Keohane, 2018). Even worse, it was anticipated that the search for a new CEO would take months (Keohane, 2018). The board apparently had neither anticipated nor planned a CEO exit, and had not developed potential long-term internal successor candidates, but tried to fix the situation in the short term by establishing a complex temporary management structure and appointing an interim board chair, buying time to find a new CEO. Further, analysts criticized the firm for not improving its cost structure quickly enough and suggested that the ongoing wage negotiations would "delay desperately needed changes to the group strategy" (Spero & Keohane, 2018).

The board has also recently undergone changes (Air France-KLM, 2017); nonetheless, even in 2018, only six of the 18 board members were independent directors, of which very few had airline industry experience (Air France-KLM, 2018b). Thus, the board lacked the organizing capabilities to effectively monitor the executive team; it also had a weak understanding of the firm's strategic challenges, particularly the need to significantly improve its cost structure. The recent change in chairmanship reduced the board's relationship-building capabilities with which to address the current turmoil in the firm. With its 14 percent stake, but 23 percent voting rights, the French state has an influence on the board (Spero & Keohane, 2018). Nonetheless, the government recently stated that it would not bail out Air France-KLM even if the employee strikes were to continue. France's Economy Minister, Bruno Le Maire, stated that the airline may soon "disappear" (Alderman, 2018; Bershidsky, 2018). Overall, the Air France-KLM case demonstrates the detrimental effects that a lack of board governance capabilities can have on a firm.

A FUTURE RESEARCH AGENDA ON BOARD CAPABILITIES

A capability-based view suggests that boards benefit from having capabilities to fulfill their governance responsibilities. However, there is little research on board capabilities. We therefore develop an agenda for future research on board capabilities by outlining important research questions to better understand the different types of board capabilities and broader concerns. Table 1 summarizes the recommended future research questions.

INSERT TABLE 1 ABOUT HERE.

Future research on board organizing capabilities. Future research needs to examine how boards develop organizing capabilities over time. Specifically, we need to understand the organizing principles that boards use to leverage directors' KSAOs in monitoring and advising on strategic issues and the board designs that facilitate the effective use of directors' KSAOs. To continuously evaluate the board's expertise portfolio, directors' KSAOs need to be regularly evaluated. For instance, a U.S. director told us that a board on which he served had a formal annual process to evaluate all directors' expertise. We need more insights into the specifics of such formal evaluation processes and how these relate to governance effectiveness. Which organizing principles do boards use to engage in such an assessment? For instance, do they rely on external consultants to do the assessment, or do they have an internal team dedicated to such assessment? How do boards respond if they score low on particular strategically important expertise areas? Do boards complement their KSAOs with external advisors or do they change the board composition? Finally, we need to know more about how new directors' onboarding processes can best be designed to help them understand the company, industry, and important stakeholders, as well as to help other directors and executives learn about the expertise such new directors bring to the board and how they could advise them on strategic matters.

Future research on board relationship-building capabilities. Future research is required to identify the underlying dimensions of board relationship-building capabilities. We need to better understand how directors build and leverage relationships with different individuals to gather information about and influence strategic activities. Directors with expertise in specific strategic activities (e.g., acquisitions, managing alliances, internal innovation programs) are valuable discussion partners for executives who face related challenges (e.g., assessing promising acquisition targets or alliance partners, improving internal innovation). Yet, to facilitate such guidance from directors, top executives need to have established good working relationships with the directors, making it easier for them to identify a particular director with whom to discuss strategic issues. Do directors build such relationships with executives when they are newly appointed – and, if so, how? Further, directors differ in their relationships with key stakeholders, such as suppliers, customer groups, and business partners. Do boards evaluate these relationships and how they change once directors have been appointed? For instance, directors may develop relationships with new stakeholders through additional professional networks. Such relationships may become valuable when the firm seeks to enter new industries or geographical markets, but the executives and other board directors need to be informed about their directors' networks, to access and benefit from their insights and from special access to information in their external networks.

It is also important to understand the relationship between the board chair and the CEO and how this influences board governance. Recent research shows that board chairs may have different orientations towards the CEO, ranging from "controlling" or monitoring and overseeing the CEO to "collaborating" or advising and guiding the CEO (Krause, 2017; Oliver, Krause, Busenbark, & Kalm, 2018). An interesting question for future research is how board chairs develop good working relationships with the CEO, depending on their orientation towards the CEO.

Boards need to orchestrate and leverage the directors' different relationships with internal and external stakeholders so as to access valuable information about strategic activities as well as opportunities and threats. However, the importance of trust-based working relationships may vary across different strategic activities and stakeholders. For instance, directors' trust-based relationships with alliance partners and acquisition targets are important in making decisions about them and their implementation (e.g., designing the acquisition integration processes). Conversely, mutual trust between the directors and specific employee groups is essential if directors are to learn about internal innovation processes and outcomes. Thus, we need more insights into how the working relationships vary across board directors and different stakeholders in the firm, and how boards leverage these relationships to effectively govern the firm's strategic activities.

Future research on board integration capabilities. Little is known about how directors use, share, and complement their human capital to develop an overarching *big picture* perspective on strategic issues. We need to better understand how directors' team-generic KSAOs can facilitate the board's knowledge-sharing and overarching strategic perspective. Moreover, it remains unclear how boards specifically assess whether new strategic proposals fit the existing strategic portfolio. Which processes do boards use to evaluate a potential fit or misfit? Do they rely on their own interactions with the executives for such an assessment, or do they complement these by requesting help from consultants, industry experts, and other stakeholders? In terms of monitoring, we need to better understand how regularly boards review the firm's resource allocation process, and when such processes need to be adjusted to invest in new strategic opportunities.

Future research on board reconfiguration capabilities. Concerning reconfiguration capabilities, future research needs to examine how directors' team-generic KSAOs influence the board's ability to reach a consensus on resource reallocation to different new strategic initiatives. Based on their functional expertise, individual directors may support executives' strategic proposals differently. While there is usually a debate and discussion on such proposals in the boardroom, it remains unclear how directors reach a consensus on where to invest, and where not if they disagree. Team-generic capabilities could alleviate such conflicts.

Further, research needs to determine which team-generic KSAOs are particularly important for board reconfiguration capabilities if a firm operates in a highly dynamic vs. a less dynamic industry. This is an important concern, given that firms in dynamic environments need to be more entrepreneurial, and the uncertainty created by rapid changes often cause managers to be more conservative in investing in new opportunities (Keats & Hitt, 1988). For instance, strong interpersonal relationships and effective communication are important for the board's information sharing and for exchanges between directors and stakeholders (e.g., owners or potential investors).

Future research is needed to understand the methods boards use to refresh their expertise portfolio. For instance: What are the characteristics of effective, continuous evaluation systems of board directors' KSAOs? What role does the board chair play in this process? Finally, we need to know more about how boards address emerging technological threats (e.g., cybersecurity) and opportunities (e.g., big data analytics or machine learning) in their governance, particularly how they ensure that resource allocations are revised so as to seize new technological opportunities.

Broader questions: In addition to the different board capability types, future research needs to examine board capabilities' roles in different contexts. For instance, directors of entrepreneurial firms may engage more strongly with their CEO in strategic decision-making (Garg & Eisenhardt, 2017) than those of larger, more established firms. Researchers who examine board governance in entrepreneurial, medium-sized, and large firms can gain valuable insights into how context matters for developing, applying, and maintaining governance capabilities.

Further, each board capability may matter in different ways, depending on the situation a board faces, for instance, these capabilities' relevance and value may vary depending on a firm's strategic condition (i.e. operating in a growth period or facing a strategic crisis). Major crises can mark critical transition points and can have strategic implications that require frequent changes to firms' resource allocations (e.g., through divestitures or by downsizing selected functions), even to their capital structure. Such crises therefore may require adjustments or major changes to the planned strategy and demand rapid implementation. Boards are likely to become more active and more visible during major crises than in strategic growth periods. A key research question is which KSAOs and board capabilities matter more for governing strategic activities during strategic growth vs. crisis periods. Further, because boards are likely to become more active during times of crisis, we need to understand how their meeting frequency and the extent of their interactions with internal and external stakeholders influence their governance during these times.

Corporate crises' degree of predictability differs. An emerging crisis, such as a performance crisis resulting from successive performance declines, is characterized by an accumulation of mistakes and imperfections in the organization over time, and often goes unnoticed or is insufficiently analyzed by managers (Roux-Dufort, 2009). Certain crises that arise from internal operations, such as the exposure of corporate misconduct (e.g., accounting frauds), can present special problems for the board of directors, because it is the board's responsibility to monitor and prevent such incidents. An emerging crisis is easier to predict than crises precipitated by unforeseen events, such as terror attacks or political insurrection in a country where a firm has operations, major economic disruptions, significant regulatory changes, and cyberattacks on a firm's IT systems (Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017).

Alternatively, crises generated by environmental shocks are more uncertain and much less controllable (Williams et al., 2017), partly because they are induced by external changes. Such crises are often characterized by complexity and urgency (Ballesteros, Useem, & Wry, 2017). Examples are natural catastrophes, which often bring production to a halt, requiring urgent crisis management. In such cases, enterprise risk systems may fail to send adequate warning signals to the board. A board then faces strong pressure to act quickly and to support the required strategic changes by using its reconfiguration capabilities. Future research is needed to explore boards' organizing principles when they have to manage unforeseen crises under strong time pressures. Which principles have proven effective for swiftly assessing the relevant expertise in the boardroom, obtaining different views on a crisis, and making board decisions on how to address a crisis?

Implications

Extant corporate governance research has, to a large extent, examined the roles of board human capital (Haynes & Hillman, 2010; Kroll, Walters, & Wright, 2008), board social capital (Beckman & Haunschild, 2002), and – more selectively – board cognition (Forbes & Milliken, 1999; Tuggle et al., 2010) in specific strategic actions. Our model builds on and extends prior research by focusing on board capabilities and their relationships to board effectiveness. We have also extended research on teams in organizations (Mathieu et al., 2014) to the board context by examining the different KSAO types, i.e. task-specific, team-generic, and firm-specific KSAOs. We have added firm-specific KSAOs as a new dimension, which are particularly important for boards, because their members use them to determine the allocation and leveraging of company resources. Thus, our work adds value to research on directors' attributes, proxies to measure directors' human and social capital as well as their orientations, as emphasized in prior research.

This article increases our understanding of *how* distinct types of board governance capabilities influence strategic activities. We contribute to corporate governance research by offering a comprehensive perspective on the individual (board director) and the team (the board of directors) levels, as well as on the intersections at which directors need to understand both the firm and the environment. This view illustrates the challenges that boards face regarding their composition, i.e. building the foundation of governance capabilities at multiple levels. Whereas previous corporate governance research has examined antecedents of distinct board roles, such as monitoring and advising, we have introduced a more fine-grained perspective on board governance by exploring its specific foundations at the director, interpersonal, and board levels. We thereby extend corporate governance research's perspective on the compositional challenges for boards and their governance (Hambrick et al., 2015; Johnson et al., 2012; Lynall et al., 2003) by highlighting the multilevel nature of board KSAOs required for effective governing capabilities.

This is the first work to use a capability lens to examine the types of governance capabilities required for board directors to fulfill their roles. Further, the interviews with multiple directors across three continents and the illustrative company cases strongly support the capability-based view of boards. Moreover, research on dynamic capabilities has selectively addressed corporate governance concerns, suggesting that inexperienced outside directors may not have the required talent to diagnose strategic problems and to initiate responses (Teece, 2007). Thus, directors need to be replaced to signal to the external stakeholders that the board is taking corrective steps to improve its capabilities (Marcel, Cowen, & Ballinger, 2017). However, boards cannot simply replace outside directors with inside directors. Instead, boards must attract and appoint directors with required task-specific KSAOs that allow them to contribute to monitoring strategic risks over time. Hence, our framework suggests that boards need to continuously evaluate their current and required KSAO portfolio, and that actions should be taken to change the board composition, if needed.

To measure governance capabilities, scholars first need to examine directors' KSAOs. Research on board human capital has shown how we can measure directors' knowledge and expertise, as well as their social capital (Haynes & Hillman, 2010), but it may be difficult to gather data on directors' individual capabilities. Further, the aggregated board capabilities grounded in directors' KSAOs need to be operationalized. This will require the integration of the various individual board members' KSAOs. Combining different data sources, such as board minutes, protocols (Tuggle et al., 2010), surveys, and interviews (Judge & Zeithaml, 1992) could provide a rich foundation for identifying distinct board capabilities required under different strategic conditions.

An important practice implication of a capability-based view is that the board or the nominating committee should consider the board capabilities needed when appointing a new director (Nadler, 2004), considering the firm's current strategy and its future strategic direction (Withers, Hillman, & Cannella, 2012). When outside directors are appointed, it is essential to consider their professional or task-specific KSAOs, along with their abilities to work in a team. In short, the director recruitment and selection require a more fine-grained search process than that used in many board appointments. Such a process requires matching candidates' KSAOs with those of the existing board composition and the firm's strategy.

In conclusion, this work provides the basis for fruitful and important empirical research on board capabilities, making an important contribution to the field, with critical implications for both board practices and their evaluation.

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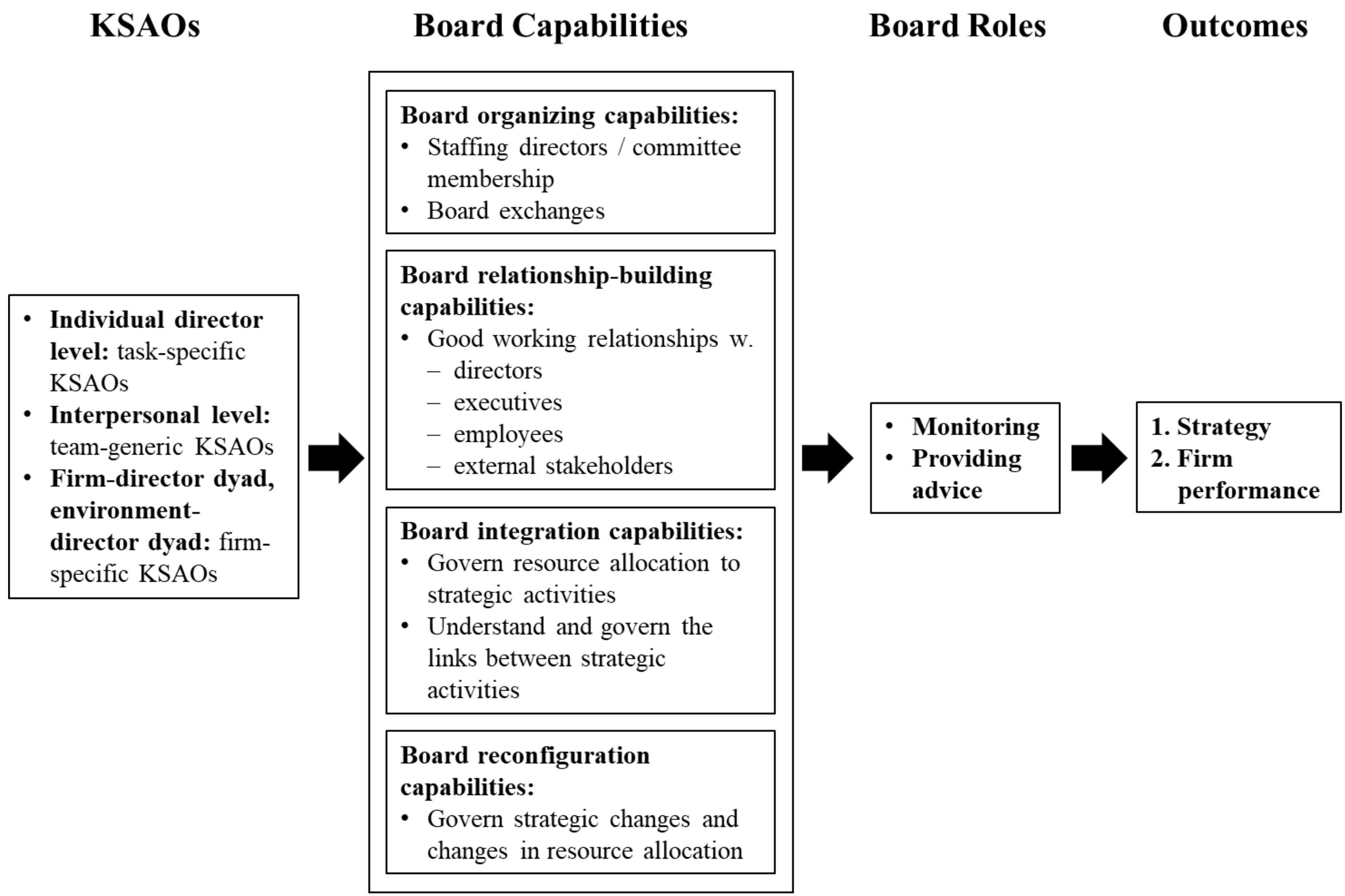
TABLE 1: Future Research Suggestions on Board Governance Capabilities

Governance Capability Type	**Suggested Future Research Questions**
Board organizing capabilities	• Which organizing principles, meeting types, and other coordination types are the more efficient and effective in leveraging board KSAOs? • Which organizing principles help boards to evaluate their KSAOs? • How do boards respond and re-organize when scoring low on specific yet important areas of expertise? • Which onboarding processes do boards use to effectively leverage new directors' KSAOs?
Board relationship-building capabilities	• How do specialist directors interact with the CEO and other executives to build relationships that help to govern specific strategic activities? • How do board chairs develop good working relationships with the CEO and what influence does the board chair's orientation have in this regard? • How do boards leverage their directors' relationships with different stakeholders for their governance?
Board integration capabilities	• Which processes facilitate the development of the board's *big picture* perspective on strategic issues? • How do boards assess whether new strategic proposals fit the company's existing strategic portfolio? • How regularly do boards review the resource allocation process and strategic results? • How do boards assess whether and how to re-allocate resources to strategic investment proposals?

Board reconfiguration capabilities	• How do team-generic KSAOs influence the board's ability to reach a consensus on reallocating resources to various new strategic initiatives? • Which team-generic KSAOs are particularly important for board reconfiguration capabilities if the firm operates in a highly dynamic industry rather than a less dynamic one? • What are the characteristics of effective, continuous evaluation systems of board directors' KSAOs? What is the role of the board chair in this regard? • How do boards address emerging technological threats (e.g., cybersecurity) and opportunities (e.g., big data analytics or machine learning) in their governance?
Broader questions	• How do entrepreneurial, medium-sized, and large firms differ in their governance capabilities? • Which KSAOs and board capabilities matter more for governing strategic activities during strategic growth vs. crisis periods? • How do boards' meeting frequency and the extent of their interactions with internal and external stakeholders, influence their governance in times of crisis vs. strategic growth periods? • Which organizing principles have proven effective when boards must govern unforeseen crises under strong time pressure?

FIGURE 1: A Framework of Board Capabilities



AUTHOR BIOGRAPHIES

Patricia Klarner (pklarner@wu.ac.at) is a Professor and Director of the Institute for Organization Design at Vienna University of Economics and Business. Her research focuses on corporate strategy, strategic change, corporate governance, and strategic leadership. Her work has been published in journals such as the *Academy of Management Journal*, *Academy of Management Perspectives*, and *Long Range Planning.*

Toru Yoshikawa (toru@smu.edu.sg) is Professor of Strategic Management at Lee Kong Chian School of Business, Singapore Management University. His main research interests include corporate governance and corporate strategy. He has published his articles in such academic journals as *Strategic Management Journal*, *Academy of Management Journal*, and *Journal of Management.*

Michael A. Hitt (mhitt@mays.tamu.edu; M.A.Hitt@tcu.edu) is a University Distinguished Professor Emeritus at Texas A&M University and a Distinguished Research Fellow at Texas Christian University. He received his PhD from the University of Colorado. He has authored a number of articles and books and his research focuses on international strategy, strategic entrepreneurship, country institutions, strategy implementation and corporate governance.